

Storm Analysis

As of 09/08/2017 12:00 EDT, water levels across the southern Florida, from Trident Pier to St Petersburg, FL, are at or near normal tide levels. Over the past week, water levels have been averaging 0.3 to 0.5 feet above normal tide levels, with slightly higher averages for stations located along the western shore of Florida.

Winds across the Florida Peninsula are 8 to 15 knots with gusts to 20 knots and barometric pressure remains normal.

Water Level and Meteorological plots available below are updated automatically. A line denoting <u>Mean Higher High Water</u> (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional data, please see the <u>Center for Operational Oceanographic Products & Services</u> website. For more information or archived products and reports, please see the <u>Storm QuickLook</u> Homepage.

Analyst:LAH

SELECT NATIONAL HURRICANE CENTER ADVISORY INFORMATION:

Hurricane Irma Advisory Number 38

NWS National Hurricane Center Miami FL

1100 AM EDT Fri Sep 08 2017

...EYE OF HURRICANE IRMA MONITORED BY HURRICANE HUNTER PLANES AND CUBAN RADARS...

...HURRICANE CONDITIONS SPREADING WESTWARD OVER PORTIONS OF CUBA AND THE CENTRAL BAHAMAS...

SUMMARY OF 1100 AM EDT...INFORMATION

LOCATION...22.0N 75.3W

ABOUT 270 MI... E OF CAIBARIEN CUBA

ABOUT 405 MI... SE OF MIAMI FLORIDA

MAXIMUM SUSTAINED WINDS...150 MPH...

PRESENT MOVEMENT...WNW OR 285 DEGREES AT 14 MPH...

MINIMUM CENTRAL PRESSURE...927 MB...27.38 INCHES

WATCHES AND WARNINGS

CHANGES WITH THIS ADVISORY:

The Storm Surge Warning has been extended from Jupiter Inlet northward to Sebastian Inlet and from Bonita Beach northward to Venice.

A Storm Surge Watch has been issued from north of Sebastian Inlet to Ponce Inlet.

The Hurricane Watch has been extended northward along the east coast of Florida to the Flagler/Volusia County Line, and along the west coast of Florida to Anclote River.

SUMMARY OF WATCHES AND WARNINGS IN EFFECT:

A Storm Surge Warning is in effect for...

- * Sebastian Inlet southward around the Florida peninsula to Venice
- * Florida Keys

A Storm Surge Watch is in effect for...

* North of Sebastian Inlet to Ponce Inlet

A Hurricane Warning is in effect for...

- * Jupiter Inlet southward around the Florida peninsula to Bonita Beach
- * Florida Keys
- * Lake Okeechobee
- * Florida Bay
- * Southeastern Bahamas and the Turks and Caicos Islands
- * Cuban provinces of Camaguey, Ciego de Avila, Sancti Spiritus, and Villa Clara
- * Central Bahamas
- * Northwestern Bahamas

A Hurricane Watch is in effect for...

- * North of Jupiter Inlet to the Flagler/Volusia County Line
- * North of Bonita Beach to Anclote River
- * Cuban provinces of Guantanamo, Holguin, Las Tunas and Matanzas

A Tropical Storm Warning is in effect for...

* Cuban provinces of Guantanamo, Holguin, and Las Tunas

A Storm Surge Warning means there is a danger of life-threatening inundation, from rising water moving inland from the coastline, during the next 36 hours in the indicated locations. For a depiction of areas at risk, please see the National Weather Service Storm Surge Watch/Warning Graphic, available at hurricanes.gov. This is a life-threatening situation. Persons located within these areas should take all necessary actions to protect life and property from rising water and the potential for other dangerous conditions. Promptly follow evacuation and other instructions from local officials.

A Storm Surge Watch means there is a possibility of life-threatening inundation, from rising water moving inland from the coastline, in the indicated locations during the next 48 hours. For a depiction of areas at risk, please see the National Weather Service Storm Surge Watch/Warning Graphic, available at hurricanes.gov.

A Hurricane Warning means that hurricane conditions are expected somewhere within the warning area. Preparations to protect life and property should be rushed to completion.

A Hurricane Watch means that hurricane conditions are possible within the watch area. A watch is typically issued 48 hours before the anticipated first occurrence of tropical-storm-force winds, conditions that make outside preparations difficult or dangerous.

A Tropical Storm Warning means that tropical storm conditions are expected somewhere within the warning area.

Interests elsewhere in Cuba, Florida, and the southeastern United States should monitor the progress of Irma.

For storm information specific to your area in the United States, including possible inland watches and warnings, please monitor products issued by your local National Weather Service forecast office. For storm information specific to your area outside the United States, please monitor products issued by your national meteorological service.

DISCUSSION AND 48-HOUR OUTLOOK

At 1100 AM EDT, the distinct eye of Hurricane Irma was located near latitude 22.0 North, longitude 75.3 West. Irma is moving toward the west-northwest near 14 mph, and this motion is expected to continue for the next day or so with a decrease in forward speed. A turn toward the northwest is expected by late Saturday. On the forecast track, the eye of Irma should move near the north coast of Cuba and the central Bahamas today and Saturday, and be near the Florida Keys and the southern Florida Peninsula Sunday morning.

Maximum sustained winds are near 150 mph with higher gusts. Irma is a category 4 hurricane on the Saffir-Simpson Hurricane Wind Scale. Some fluctuations in intensity are likely during the next day or two, but Irma is forecast to remain a powerful category 4 hurricane as it approaches Florida.

Hurricane-force winds extend outward up to 70 miles from the center and tropical-storm-force winds extend outward up to 185 miles.

The latest minimum central pressure reported by both Air Force and NOAA Hurricane Hunter planes was 927 mb (27.38 inches).

HAZARDS AFFECTING LAND

STORM SURGE: The combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water is expected to reach the following HEIGHTS ABOVE GROUND if the peak surge occurs at the time of high tide...

SW Florida from Captiva to Cape Sable...6 to 12 ft Jupiter Inlet to Cape Sable including the Florida Keys...5 to 10 ft Ponce Inlet to Jupiter Inlet...3 to 6 ft Venice to Captiva...3 to 6 ft

The deepest water will occur along the immediate coast in areas of onshore winds, where the surge will be accompanied by large and destructive waves. Surge-related flooding depends on the relative timing of the surge and the tidal cycle, and can vary greatly over short distances. For information specific to your area, please see products issued by your local National Weather Service forecast office.

The combination of a life-threatening storm surge and large breaking waves will raise water levels ABOVE NORMAL TIDE LEVELS by the following amounts within the hurricane warning area near and to the north of the center of Irma. Near the coast, the surge will be accompanied by large and destructive waves.

Turks and Caicos Islands...15 to 20 ft Southeastern and central Bahamas...15 to 20 ft Northwestern Bahamas...5 to 10 ft

Northern coast of Haiti and the Gulf of Gonave...1 to 3 ft Northern coast of Cuba in the warning area...5 to 10 ft

WIND: Hurricane conditions are occurring on the Turks and Caicos Islands, with tropical storm and hurricane conditions ongoing in the southeastern Bahamas. These conditions will move into the central Bahamas later today. Hurricane conditions are expected within the hurricane warning area along the north coast of Cuba late today and Saturday. Hurricane conditions are expected in the northwestern Bahamas tonight and Saturday, and in portions of southern Florida and the Florida Keys Saturday night or early Sunday.

Hurricane conditions are possible within the watch area in Florida by Sunday, with tropical storm conditions possible by late Saturday.

RAINFALL: Irma is expected to produce the following rain accumulations through Tuesday night:

Dominican Republic and Haiti...additional 1 to 4 inches.

Turks and Caicos...additional 2 to 4 inches.

Southern Bahamas and northern Cuba...10 to 15 inches, isolated 20 inches. Southern Cuba...4 to 8 inches, isolated 12 inches.

Jamaica...1 to 2 inches. The upper Florida Keys into southeast Florida...10 to 15 inches, isolated 20 inches. Lower Florida Keys...4 to 8 inches. Eastern Florida northward into coastal Georgia...8 to 12 inches, isolated 16 inches. Western Florida peninsula...4 to 8 inches, isolated 12 inches. Much of Georgia...South Carolina...and Western North Carolina...3 to 6 inches.

In all areas this rainfall may cause life-threatening flash floods and, in some areas, mudslides.

SURF: Swells generated by Irma are affecting Puerto Rico, the Virgin Islands, the southeastern Bahamas, the Turks and Caicos Islands, the northern coast of the Dominican Republic, and should start affecting portions of the southeast coast of the United States ater today and tonight. These swells are likely to cause life-threatening surf and rip current conditions. Please consult products from your local weather office.

NEXT ADVISORY

Next intermediate advisory at 200 PM EDT. Next complete advisory at 500 PM EDT.

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Forecaster Avila

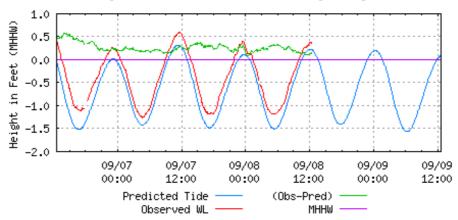
For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

Jump to: Key West - Water Level, Key West - Winds, Key West - Barometric, Vaca Key - Water Level, Vaca Key - Winds, Vaca Key - Barometric, Virginia Key - Water Level, Virginia Key - Winds, Lake Worth Pier - Water Level, Lake Worth Pier - Winds, Trident Pier - Water Level, Trident Pier - Winds, Naples - Water Level, Naples - Winds, Fort Myers - Water Level, Fort Myers - Winds, Port Manatee - Water Level, Port Manatee - Barometric, St

Petersburg, Tampa Bay - Water Level, St Petersburg, Tampa Bay - Winds

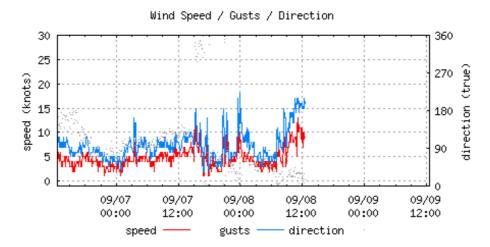
NOAA/NOS/CO-OPS 8724580 Key West, FL

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/08/2017 12:36 (EDT). Data relative to MHHW Observed: 0.35 ft. Predicted: 0.21 ft. Residual: 0.14 ft. Historical Maximum Water Level: Oct 24 2005, 3.14 ft. Next High Tide: 09/09/2017 00:18 (EDT), 0.19 ft.

NOAA/NOS/CO-OPS 8724580 Key West, FL



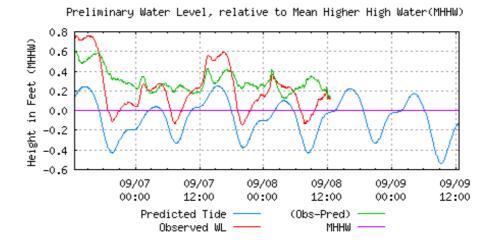
Last Observed Sample: 09/08/2017 12:36 (EDT) Wind Speed: 10 knots Gusts: 16 knots Direction: 21° T

NOAA/NOS/CO-OPS 8724580 Key West, FL

Barometric Pressure 1016 1015 Pressure (mb) 1014 1013 1012 1011 09/07 09/07 09/08 09/08 09/09 09/09 00:00 12:00 00:00 00:00 12:00 12:00 barometric pressure

Last Observed Sample: 09/08/2017 12:36 (EDT)
Barometric Pressure: 1012.5 mb

NOAA/NOS/CO-OPS 8723970 Vaca Key, FL



Last Observed Sample: 09/08/2017 12:30 (EDT). Data relative to MHHW Observed: 0.13 ft. Predicted: -0.02 ft. Residual: 0.15 ft. Historical Maximum Water Level: Oct 24 2005, 5.80 ft. Next High Tide: 09/08/2017 16:11 (EDT), 0.22 ft.

NOAA/NOS/CO-OPS 8723970 Vaca Key, FL

Wind Speed / Gusts / Direction 30 360 25 270 direction (true) speed (knots) 20 15 180 90 09/09 09/09 09/07 09/07 09/08 09/08 00:00 12:00 00:00 12:00 00:00 12:00 gusts direction speed

Last Observed Sample: 09/08/2017 12:30 (EDT) Wind Speed: 10 knots Gusts: 14 knots Direction: 42° T

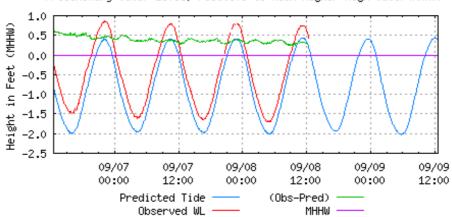
NOAA/NOS/CO-OPS 8723970 Vaca Key, FL

Barometric Pressure 1016 1015 Pressure (mb) 1014 1013 1012 1011 09/07 09/07 09/09 09/09 09/08 09/08 00:00 12:00 00:00 12:00 00:00 12:00 barometric pressure

Last Observed Sample: 09/08/2017 12:30 (EDT)
Barometric Pressure: 1012.3 mb

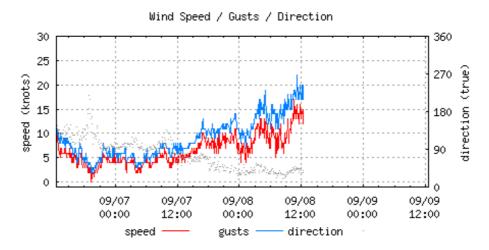
NOAA/NOS/CO-OPS 8723214 Virginia Kev, FL

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/08/2017 12:30 (EDT). Data relative to MHHW Observed: 0.36 ft. Predicted: 0.13 ft. Residual: 0.23 ft. Historical Maximum Water Level: Oct 24 2005, 2.58 ft. Next High Tide: 09/08/2017 23:29 (EDT), 0.41 ft.

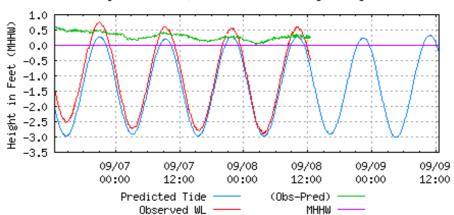
NOAA/NOS/CO-OPS 8723214 Virginia Key, FL



Last Observed Sample: 09/08/2017 12:30 (EDT) Wind Speed: 14 knots Gusts: 19 knots Direction: 37° T

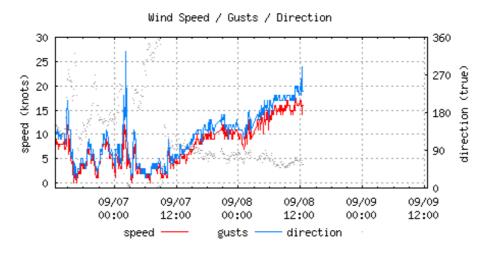
NOAA/NOS/CO-OPS 8722670 Lake Worth Pier, FL

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/08/2017 12:30 (EDT). Data relative to MHHW Observed: -0.47 ft. Predicted: -0.74 ft. Residual: 0.27 ft. Historical Maximum Water Level: Oct 28 2012, 2.00 ft. Next High Tide: 09/08/2017 22:26 (EDT), 0.24 ft.

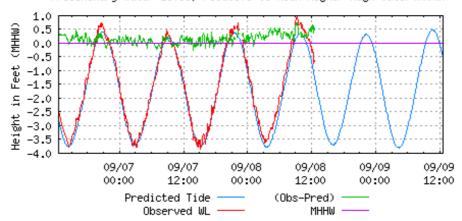
NOAA/NOS/CO-OPS 8722670 Lake Worth Pier, FL



Last Observed Sample: 09/08/2017 12:30 (EDT) Wind Speed: 16 knots Gusts: 19 knots Direction: 57° T

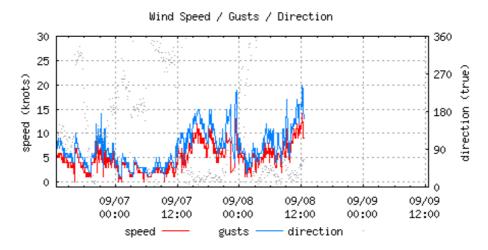
NOAA/NOS/CO-OPS 8721604 Trident Pier, FL

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/08/2017 12:30 (EDT). Data relative to MHHW Observed: -0.64 ft. Predicted: -1.20 ft. Residual: 0.56 ft. Historical Maximum Water Level: Sep 26 2004, 4.01 ft. Next High Tide: 09/08/2017 22:14 (EDT), 0.32 ft.

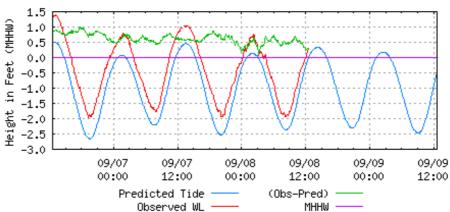
NOAA/NOS/CO-OPS 8721604 Trident Pier, FL



Last Observed Sample: 09/08/2017 12:30 (EDT) Wind Speed: 9 knots Gusts: 13 knots Direction: 65° T

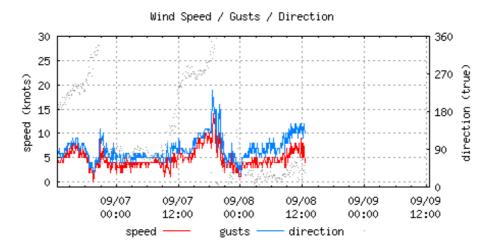
NOAA/NOS/CO-OPS 8725110 Naples, FL

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/08/2017 12:36 (EDT). Data relative to MHHW Observed: 0.24 ft. Predicted: 0.02 ft. Residual: 0.22 ft. Historical Maximum Water Level: Dec 21 1972, 3.11 ft. Next High Tide: 09/08/2017 14:15 (EDT), 0.33 ft.

NOAA/NOS/CO-OPS 8725110 Naples, FL



Last Observed Sample: 09/08/2017 12:36 (EDT) Wind Speed: 8 knots Gusts: 15 knots Direction: 70° T

NOAA/NOS/CO-OPS 8725520 Fort Myers, FL

Preliminary Water Level, relative to Mean Higher High Water(MHHW) 1.5 Height in Feet (MHHW) 1.0 0.5 0.0 -0.5-1.0 09/07 09/08 09/07 09/08 09/09 09/09 00:00 12:00 00:00 12:00 00:00 12:00

Last Observed Sample: 09/08/2017 12:30 (EDT). Data relative to MHHW Observed: -0.39 ft. Predicted: -0.87 ft. Residual: 0.48 ft. Historical Maximum Water Level: Nov 23 1988, 3.41 ft. Next High Tide: 09/08/2017 18:06 (EDT), 0.18 ft.

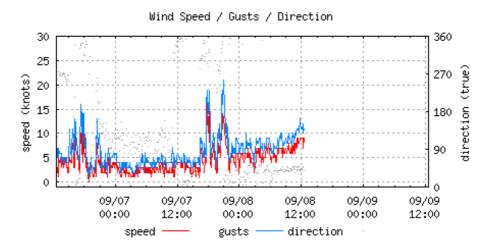
(Obs-Pred)

MHHW

Predicted Tide

Observed WL

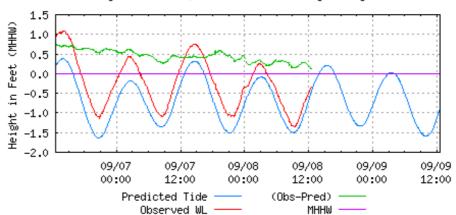
NOAA/NOS/CO-OPS 8725520 Fort Myers, FL



Last Observed Sample: 09/08/2017 12:30 (EDT) Wind Speed: 9 knots Gusts: 11 knots Direction: 40° T

NOAA/NOS/CO-OPS 8726384 Port Manatee, FL

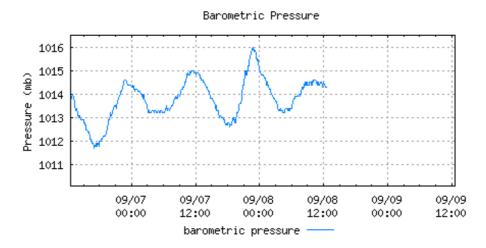
Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/08/2017 12:30 (EDT). Data relative to MHHW Observed: -0.34 ft. Predicted: -0.47 ft. Residual: 0.13 ft. Historical Maximum Water Level: Sep 6 2004, 2.29 ft.

Next High Tide: 09/08/2017 15:26 (EDT), 0.21 ft.

NOAA/NOS/CO-OPS 8726384 Port Manatee, FL

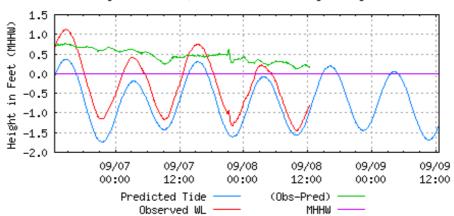


Last Observed Sample: 09/08/2017 12:30 (EDT)

Barometric Pressure: 1014.3 mb

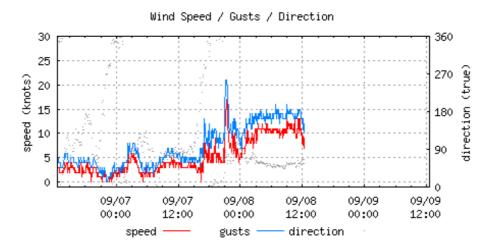
NOAA/NOS/CO-OPS 8726520 St Petersburg, Tampa Bay, FL

Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 09/08/2017 12:24 (EDT). Data relative to MHHW Observed: -0.80 ft. Predicted: -0.96 ft. Residual: 0.16 ft. Historical Maximum Water Level: Aug 31 1985, 4.00 ft. Next High Tide: 09/08/2017 16:12 (EDT), 0.19 ft.

NOAA/NOS/CO-OPS 8726520 St Petersburg, Tampa Bay, FL



Last Observed Sample: 09/08/2017 12:24 (EDT) Wind Speed: 9 knots Gusts: 12 knots Direction: 57° T

Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8724580	Key West, FL	09/08/2017 12:36 (EDT)	0.35 ft	0.21 ft	0.14 ft	0.49 ft
8723970	Vaca Key, FL	09/08/2017 12:30 (EDT)	0.13 ft	-0.02 ft	0.15 ft	0.60 ft
8723214	Virginia Key, FL	09/08/2017 12:30 (EDT)	0.36 ft	0.13 ft	0.23 ft	0.79 ft
8722670	Lake Worth Pier, FL	09/08/2017 12:30 (EDT)	-0.47 ft	-0.74 ft	0.27 ft	0.62 ft
8721604	Trident Pier, FL	09/08/2017 12:30 (EDT)	-0.64 ft	-1.20 ft	0.56 ft	0.96 ft
8725110	Naples, FL	09/08/2017 12:36 (EDT)	0.24 ft	0.02 ft	0.22 ft	1.04 ft
8725520	Fort Myers, FL	09/08/2017 12:30 (EDT)	-0.39 ft	-0.87 ft	0.48 ft	1.08 ft
8726384	Port Manatee, FL	09/08/2017 12:30 (EDT)	-0.34 ft	-0.47 ft	0.13 ft	0.76 ft
8726520	St Petersburg, Tampa Bay, FL	09/08/2017 12:24 (EDT)	-0.80 ft	-0.96 ft	0.16 ft	0.75 ft

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce